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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/696,652

10/30/2003

Vincent Cedric Colnot

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05/19/2008

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EXAMINER

GEE, JASON KAI YIN

ART UNIT

PAPER NUMBER

2134

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/696,652	Applicant(s) COLNOT, VINCENT CEDRIC	
	Examiner JASON K. GEE	Art Unit 2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 14-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 14-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is response to communication: RCE filed 02/08/2008
2. Claims 1-7 and 14-23 are currently pending in this application. Claims 1 and 14 are independent claims. Claims 8-13 have been cancelled.
3. No IDS was received for this application.
4. Receipt is acknowledged of a request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e) and a submission, filed on 02/08/2008.

Response to Arguments

5. Applicant's arguments filed 02/08/2008 have been fully considered but they are not persuasive.
6. The appellants have argued that Landry does not teach sending a modulated signal from the smart card to the IVR server. However, this is indeed taught by Landry. Landry teaches in col. 5 lines 9-12 that *all* interactions are accomplished via an IVR server when the telephone is not an ADSI unit. Further, col. 6 lines 1-27 teaches the smart card reader sending a modulated, as shown in the rejection below. Further, more details are shown of modulation in col. 7 lines 7-49. Multiple types of modulation is shown in this section. The first, second, and third option are all examples of modulation. Even further, the appellant points to 3 part d of the invention (col. 10 line 23) of Landry to show that communications are sent directly from the card reader to the authentication server. However, 3 d) is not applicable as this occurs only when it is in

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communication with an ADSI telephone. Although the Examiner uses this passage to point to the card reader reading the information out of a credit card, this process is the same with or without the ADSI part. Again, as shown in col. 6, the IVR server is used when an ADSI telephone is NOT used.

7. Like the applicant argues, information is sent from the card reader through a modem. Applicant is reminded that a modem stands for MODulator/DEModulator. Information sent through a modem is modulated, and then demodulated. Sending modulating signals and demodulating signals is very well known in the art, and it is indeed inherent, especially in such a system like this. Modulation/Demodulation is an inherent property of modems, as a modem is defined as a unit which modulates and demodulates signals. If information is not demodulated, a computer will receive some type of data, but it cannot be read.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 14, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landry et al US Patent No. 6,687,350 (hereinafter Landry), in view of Kia et al. US Patent No. 6,404,870 (hereinafter Kia).

As per claim 1, Landry teaches a method for a second operation of authenticating a user and securing an online transaction over a telephone, comprising: providing a card reader connecting a smart card to a telephone (col. 2 lines 25-30); transmitting from the smart card at least an identification sequence for the user to an IRV server connected to a telephone line in the form of a modulated signal (col. 10 lines 25-30; col. 5 lines 1-22; col. 6 lines 5-29; Figures 2,3;); demodulating the identification sequence at the IVR server (It is inherent that the signal is demodulated, as a modulated signal must be demodulated in order for the data to be useful and processed; also occurs at the IVR server (col. 5 lines 1-10)). However, at the time of the invention, Landry does not explicitly teach authenticating the user and the transaction at an application server receiving the demodulated identification sequence from the IVR server over a communication network wherein data processing required for generating, transmitting, and authenticating the user occur without data processing assistance from the card reader This is taught in Kia though, such as in col. 4 lines 29-36. Also, As taught in Landry, authentication and data processing are controlled by an application server, and the smart card reader is all being controlled by the server, which just relays information and acts as a gateway, as can be seen in col. 3 lines 30-50. As can be seen in Kia, the IVR in the gateway receives information and forwards it to the authentication server to process.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the references of Kia with Landry. One of ordinary skill in the art would have been motivated to perform such an addition to be able to improve

authentication systems. This is taught by Kia in col. 1 line 60 to col. 2 line 5, wherein it recites “thus, the need remains for improving the scalability and reliability of the authorization based telephone system.”

Claim 14 is rejected using the same basis of arguments used to reject claim 1 above. A card reader connected to a telephone is taught throughout the reference, such as in Landry Figure 1a and 1b. It is inherent that a telephone is connected to a telephone line. An IVR server connected to the telephone line is taught throughout the reference, such as in Figures 1, 2, 3, and col. 5 lines 1-12.

As per claim 23, Landry teaches wherein the card reader is further integrated into the telephone handset (col. 2 lines 45-68).

9. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landry and Kia as applied above, and further in view of Chang et al. US Patent No. 6,715,082 (hereinafter Chang).

As per claim 2, Landry teaches a credit card number in col. 1 lines 25-29, which is a unique number. However, Landry and Brown do not explicitly teach the use of one time keys on a smart card. These are well known in the art, as can be seen in Chang col. 2 lines 10-25.

At the time of the invention, it would have been obvious to include random one-time keys to be stored on smart cards. One of ordinary skill in the art would have been motivated to perform such an addition to increase security. This is taught by Chang in col. 2 lines 11-15.

As per claim 3, the one-time password taught by Chang in col. 2 lines 10-25 is a key used in a session. It is taught in Chang that this one time password/key is not transmitted to an authentication server, as it is only transmitted to an access server.

Claim 15 is rejected using the same basis of arguments used to reject claim 2 above.

Claim 16 is rejected using the same basis of arguments used to reject claim 3 above.

10. Claims 4 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landry, Kia, and Chang as applied above, and further in view of Brinkmeyer et al. US Patent No. 5,619,573 (hereinafter Brink).

As per claim 4, as best understood by the Examiner, the Landry combination does not explicitly teach wherein the session key is a function of a previous key. However, this is taught by Brink, such as in col. 3 lines 60 to col. 4 line 25. This would be inherently known by an authentication server, as the authentication server needs to know the key in order to verify if it was valid or not.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to include using a previously known key. One of ordinary skill in the art would have been motivated to perform such an addition to create more security. As they are one way functions, it would be extremely difficult to determine the previous keys unless they were known. By using previous keys, it would increase security, as it would almost guarantee that the key was actually known by the user and the authentication server, and not a malicious middle man.

Claim 17 is rejected using the same basis of arguments used to reject claim 14 above.

11. Claims 5-7 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landry, Kia, Chang, and Brink as applied above, and further in view of Bruce Schneier's Applied Cryptography, 2nd Edition (1997), (hereinafter Schneier).

As per claims 5-7, as best understood by the Examiner, the claims recite the use of encryption keys, decryption, one-way functions and authentication. These are well known in the art, as taught throughout Schneier, such as in pages 28-42. Pin codes are taught throughout Landry and Kia, and it would be obvious to encrypt PIN's, because PIN contains sensitive information, which should never be sent in the clear. Further, it is common practice that authentication is valid if PIN's match a PIN stored in a database. (that's how PIN's or passwords work). Further, databases holding security

information is taught throughout Kia, such as in col. 2 lines 14-20 and in col. 3 lines 15-24 and col. 4 lines 29-37.

At the time of the invention, it would have been obvious to combine the teachings of Schneier with the Landry combination. One of ordinary skill in the art would have been motivated to perform such an addition to be able to provide a secure system. The Landry combination is already directed to secure online transactions, and Schneier teaches the details of this.

Claim 18-20, as best understood by the Examiner, are rejected using the same basis of arguments used to reject claims 507 above.

12. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being obvious over Landry and Kia as applied above.

As per claim 21, the claim recites wherein the smart card is powered by the voltage provided by the telephone line. It is well known in the art that telephones are powered by the power flowing from telephone lines. Since the Smart Card reader is attached to the telephone, as taught in Landry, it would have been obvious to power a smart card that is connected to the phone using the voltage provided by the phone, as this would reduce the amount of more power sources and voltage lines. Further, Landry teaches that the smart card may be powered by the telephone set, in col. 7 lines 50-54. As already discussed, many phones are powered by the telephone lines.

As per claim 22, it is inherent that a smart card would transmit signals via contacts. Although the Landry combination does not explicitly teach ISO contacts, it would have been obvious to do so, if not inherent. As Landry already teaches utilizing contacts, it would have been obvious to utilize ISO contacts, as ISO contacts are well known in the art and used throughout industry. It would have been obvious incorporate ISO contacts for ease of use.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON K. GEE whose telephone number is (571)272-6431. The examiner can normally be reached on M-F, 7:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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05/13/2008

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